

REMARKS
Claim 88

The Examiner has rejected claim 88 under 35 U.S.C. 103 based upon U.S. Patent No. 5,993,795 to Osawa in view of U.S. Patent No. 4,907,167 to Skeirik. That rejection is respectfully traversed for the following reasons.

Claim 88 is directed to an automated bio-matter processing apparatus which provides a connected system of components suitable for continuous processing. Thus the system first describes a grinder, and then describes “a juice pH monitoring and adjustment system located downstream of the grinder to receive the juice from the grinder”. Claim 88 next describes “a heater located downstream of the juice pH monitoring and adjustment system to receive pH adjusted juice and to heat the pH adjusted juice”. Next, claim 88 requires “a centrifuge located downstream of the heater to receive heated pH adjusted juice”. Finally claim 88 requires “a computerized control system” which is communicated with each of the above-mentioned devices “so that the control system monitors and controls the automated processing apparatus”.

Osawa does not describe any of the above. Osawa merely describes a small scale batch process apparently performed in a laboratory. Those portions of Osawa referenced by the Examiner do not describe any of the equipment listed above, and certainly do not indicate that such equipment would be connected in a continuous processing system so that the pH monitoring system is located downstream of the grinder and receives juice from the grinder, and so that the heater is located downstream of the pH monitoring system and receives pH adjusted juice therefrom,

and so that the centrifuge is located downstream of the heater to receive the heated pH adjusted juice.

Those portions of Osawa referenced by the Examiner as allegedly showing the pH adjustment system, the heater and the centrifuge read as follows:

"The amount of an enzyme, the reaction time, and the reaction conditions in the enzymatic treatment can be suitably selected depending on the characteristics of the enzyme to be used. Appropriately, the amount of the enzyme to be added is in the range of 0.5-6%, preferably 1-4%, based on the amount of the substrate, the amount of the substrate is in the range of 1-20%, preferably 5-16%, based on the amount of a solvent, the pH value is in the range of 3-12, preferably 4.5-10.5, the reaction temperature is in the range of 35-75° C., preferably 45-55° C., and the reaction time is in the range of 2-12 hours, preferably 3-6 hours. The solvent to be used is suitably selected on the condition that it possesses a pH value in the range specified above and avoids impeding the enzymatic reaction. As concrete examples of the solvent which is advantageously used herein, water, carbonate buffer, and phosphate buffer may be cited. The solvent, when necessary, may have the pH value thereof adjusted with an acid or a base.

Appropriately, the enzyme is inactivated by a suitable means such as a heat treatment after completing the reaction.

The product of the enzymatic treatment consequently obtained is separated by a suitable means such as centrifugal separation or filtration into an insoluble fraction and a soluble fraction." (U.S. Patent No. 5,993,795, col. 5 lines 31-53)

It is apparent that Osawa is not describing any continuous system, but instead is merely describing what is done in the laboratory. This is even more apparent when one reviews Osawa's examples such as Example 1 found at col. 8 line 54-col. 9 line 4.

Then the Examiner cites the Skeirik patent for the purpose of suggesting automated control of the system of Osawa. But regardless of the nature of the teachings of Skeirik, since Osawa has not disclosed or described an apparatus suitable for continuous processing, there simply is no system disclosed by Osawa to be controlled by a control system like that of Skeirik.

Claim 92

Next the Examiner has rejected claim 92 under 35 U.S.C. 103 based upon Osawa in view of Skeirik as discussed above, and further in view of U.S. Patent No. 5,687,922 to Takaoka.

Claim 92 adds the feature of requiring the grinder to include “a first cutter”, “a second cutter”, and “a press”.

The Examiner cites Takaoka as allegedly disclosing “a sesame grinding device with a first cutter and a second cutter”. However the Examiner does not point to any specific part of the disclosure of Takaoka, and a study thereof by Applicant’s attorney has not located any teaching of a cutter in Takaoka. In fact, just to the contrary, Takaoka teaches the use of a pulverizer to grind material between the surfaces of a pair of mortars into a powder. These are not cutters, nor is a cutting operation described in Takaoka. As described in the present application, as for example at page 32 line 8 - page 36 line 16, the “cutters” refer to the use of blades which cut the leafy material. No such structure is in any way suggested by Takaoka.

Claim 93

Finally, the Examiner has rejected claim 93 under 35 U.S.C. 103 based upon Osawa in view of Skeirik as discussed above, and further in view of U.S. Patent No. 5,647,429 to Oktay.

Claim 93 adds the further feature to the invention of claim 88 "wherein the heater comprises a flexible length piping apparatus." This is referring to a structure like that shown in Fig. 10 of the present application and described at page 43 line 10 - page 44 line 22, wherein the piping system is constructed so that the connection of supply pipe 80 to the heat retaining pipe assembly 90 can easily be made at a selected one of the mating flanges 94 to effectively change the length of pipe through which the juice flows during the heating process, and thus to determine the time interval over which the juice is maintained at the selected temperature.

With respect, the Examiner's citation of Oktay is apparently based upon a misunderstanding. Oktay deals with heat transfer devices known as "heat pipes". Heat pipes are typically used for the cooling of electronic components and are a means for rapidly conducting heat away from the electronic component being cooled. The Examiner refers to some language at col. 4 lines 31-34 of Oktay which indicate that the heat pipes of Oktay "are interconnected by sleeves of variable lengths screwed one into the other".

What the Examiner apparently overlooks is that a "heat pipe" as described in Oktay is not a pipe that has fluid flowing therethrough, but instead is a heat conducting device that effectively has heat flowing along its length.

Claim 91, on the other hand, is referring to a pipe in the hydrodynamic sense which has liquid flowing therethrough from one end to the other. Since the exterior of

the pipe is insulated, the temperature of the juice contained within and flowing through the pipe is maintained for a selected time period by selecting the length of pipe through the which the juice must flow.

Oktay is totally irrelevant. Oktay has nothing to do with controlling the amount of heat transferred to or from a fluid flowing through a pipe. Oktay does not disclose a pipe that can conduct fluid.

Accordingly, it is respectfully submitted that claim 93 should be allowed over the cited references.

Claims 89-91

Applicant acknowledges with thanks the Examiner's indication that claims 89-91 include allowable subject matter. Those claims have not been rewritten, however, since it is believed that the parent claims from which they depend are allowable for the reasons indicated above.

Conclusion

In summary, it is believed that the arguments set forth above are sound, and accordingly reconsideration of the application is requested along with an early indication of the allowance of claims 88-93.

Respectfully submitted,



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